

# VACUUM ASSISTED CEILING FAN BLADE CLEANER

## **CROSS-REFERENCE TO RELATED APPLICATIONS**

NONE

## **STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT**

Research and development of this invention and Application have not been federally sponsored, and no rights are given under any Federal program.

## **REFERENCE TO A MICROFICHE APPENDIX**

NOT APPLICABLE

## **BACKGROUND OF THE INVENTION**

### **FIELD OF THE INVENTION**

#### **1. Field of the Invention**

This invention relates to the cleaning of ceiling fan blades and, more particularly, to the cleaning of such blades using vacuum assistance.

#### **2. Description of the Related Art**

As is well known and understood, a great portion of the populace engages each year in the practice commonly referred to as "spring cleaning". For those fortunate enough to own their own home, the procedure usually starts outdoors with the cleaning up of the lawn and garden from the ravages of winter. For those owning or renting apartments, on the other hand, the procedure usually begins with the cleaning of kitchen, living room and dining room areas -- rooms which are most often

occupied during the day -- and where various papers and other things tend to pile up, out of place. Whether the homeowner attacks these same rooms first, before starting the cleaning outdoors or not, and whether the apartment dweller turns his/her attention to these rooms first before progressing through the rest of the apartment or not, the tendency of both is to first go after those areas of the dwelling which are the most visible and the accumulations most apparent.

As will be further appreciated, this "spring cleaning" is hard work, and oftentimes quite tiring. As a result, in almost all instances, the process is ended somewhat short of completion -- many things just don't get put away, or get done. As will also be appreciated, one of the most frequent items left behind in the process is the cleaning of one's ceiling fan, and more particularly, the ceiling fan blades. Experience has shown, first of all, that the dust that accumulates on its blades only becomes apparent if one takes a close look at the blades from below, or when walking down a flight of stairs in a multi-floor dwelling at the same time glancing over towards the ceiling fan itself. Recognizing the difficulty with, and/or the danger of, standing on a chair and reaching up trying to dust the top of the ceiling fan blades, some manufacturers have suggested the use of a pole, at the end of which a brush is fixed in place; then, the fan blade could be cleaned while standing on the floor, without the need for a chair or stepladder. However, even with this type of assist, experience has shown that it brings on

another problems: namely, that as the cleaning of the ceiling fan blade is typically done after everything else in the room has been put into place, the dust which is brushed off from the fan blades then falls upon those surfaces of the room which have already been brushed, cleaned and polished. As such, that part of the room in the area of the ceiling fan has to be cleaned a second time. While an alternative suggestion might be to start off cleaning the cleaning fan blade, years of experience has shown that that is not the usual method of "spring cleaning", where those areas of the dwelling first worked upon are those which are regularly walked through during the course of a day and most open to the inhabitants and/or visitors to the house or apartment.

#### Objects of the Invention

It is an object of the present invention, therefore, to provide a new and improved manner of cleaning ceiling fan blades which obviate these problems of the prior art.

It is another object of the invention to provide this new manner of cleaning the ceiling fan blade from a standing position on the floor.

It is a further object of the invention to provide such a manner of cleaning the fan blade which virtually eliminates the possibility of any dust or debris cleaned off the ceiling fan blade from itself falling onto the floor, carpeting, furniture or other such areas beneath and around the ceiling fan.

It is an object of the present invention, also, to provide

this manner of cleaning in a way which can be accomplished easily and safely -- and by both men and women alike.

#### Summary of the Invention

As will become clear from the following description, this manner of cleaning according to the invention employs vacuum assistance. As will be seen, a housing is provided having an open top and an outlet port in the bottom. Partially within the open top is a brush which spans across the housing, and a vacuum hose detachably secures with the outlet port at one end, and to a vacuum cleaner on the other end. Whether the outlet port is substantially centered beneath the open top or whether it is offset to one side beneath the top (both, in accordance with the invention), by choosing a brush coupled with and spanning across the housing of a length greater than the width of a ceiling fan blade, moving the vacuum hose down and back along the length of the ceiling fan blade draws the brush across the top of the blade so that any dust or debris cleaned off during the process is captured within the housing, and then pulled by vacuum into the cleaner for collection in the usual manner.

In the embodiment of the invention described, the brush selected is of a length at least 4 inches, and preferably between 4 and 12 inches, so as to draw across the top of most ceiling fan blades found in use. In this embodiment, the brush may include first and second rows of bristles, separated by at least the thickness of the ceiling fan blade, so that both its top and under sides can be brushed clean simultaneously in

cleaning the blade not only of dust accumulations but of cobwebs, spiderwebs and similar unwanted collections. In such construction, the housing may be of rectangular cross-section at the open top, with its sides sloping downwardly to the ported bottom at a gradually decreasing angle, making the lateral surface area at the open top greater than at the ported bottom. As will be appreciated, this not only facilitates the greater collection of the debris, but eases the ability of the vacuum assistance in drawing down the accumulations into the vacuum cleaner. Although not a requirement for producing the desired results thus obtainable with the invention, one preferred construction employs a brush whose bristles are individually spaced one from one another. As will be apparent, the end of the vacuum hose which is detachably securable with the outlet port may be coupled with it either by an encircled, latching connection, or merely by a snug or press fit. Obviously, an extension attachment may alternatively be coupled between the hose ending and the outlet port of the housing.

#### Brief Description of the Drawings

These and other features of the present invention will be more clearly understood from a consideration of the following description, taken in connection with the accompanying drawings, in which:

FIGURE 1 is a pictorial view of a manner of cleaning a ceiling fan blade with vacuum assistance according to the invention; and

FIGURE 2 is a top perspective view helpful in an understanding of a preferred embodiment of the invention.

#### Detailed Description of the Invention

In the drawings, a vacuum cleaner 10 rests on a floor surface 12, with its vacuum hose 14 to be utilized in cleaning the individual blades 16 of a ceiling fan 18 downwardly extending from an overhead 20. As will be appreciated, in accordance with the invention, a user 22 employs the vacuum cleaner 10 and its hose 14 in cleaning the blades 16 while standing on the floor surface 12, without the need for standing on a chair, foot stool or stepladder to carry out the dusting and cleaning process. With one end of the vacuum hose 14 being coupled to the cleaner 10 at 24, to accomplish the ceiling fan blade cleaning the other end of the vacuum hose 14 (shown without an extension attachment) is coupled to a housing 30, at 32. Such coupling at 32 may be of any selected manner -- for example, by a snug or press fit, or through any type of latch arrangement, as by a securement coupling the hose 14 at the end 32 by a clockwise twist, and with an uncoupling of the hose 14 from the connection 32 by a counterclockwise twist.

As more particularly shown in FIGURE 2, such coupling of the vacuum hose 14 at the connection 32 is more specifically to an outlet port 36 positioned in a bottom 38 of the housing 30, having an open top 40 opposite the port 36. With the vacuum hose 14 being thus detachably securable with the outlet port 36 at 32, a preferred embodiment of the invention is one in which the

housing 30 is of a depth sloping downwardly from the open top 40 to the ported bottom 38 at a gradually decreasing angle (such that the housing 30 exhibits a lateral surface area greater at the open top 40 than at the bottom 38). The arrow shown by reference numeral 42 in the drawings indicates the outlet port 36 as being substantially centered beneath the open top 40, or offsettable to one side, as indicated at 44. In either location, the outlet port 36 lies beneath the open top 40, illustrated in FIGURES 1 and 2 as being of rectangular cross-section.

In accordance with the invention, a brush 50 is included, coupled with and spanning across, the housing 30, from left to right. Shown, for example, as extending partially downwardly within the housing 30, the brush 50 is selected of a length 52 greater than the width 54 of the ceiling fan blade 16 (FIGURE 1) -- with the brush 50 being of a length of at least 4 inches, and preferably between 4 and 12 inches. Furthermore, in the embodiment of FIGURE 2, the brush 50 will be seen to include first and second rows of bristles 60, 62, with the rows being separated at 64 by at least the thickness of the ceiling fan blade 16. Individual bristles of the rows 60, 62 may further be separated one from one another with this type of brush, with the individual bristles being shown at 66.

With the relative dimensioning of the housing 30, the brush 50 and the rows of brush bristles, moving the vacuum hose 14 forwardly and backwardly then fits the separated rows of bristles about the top and bottom sides of the fan blade 16 in

allowing the brush to be drawn back and forth across those two surfaces. In so doing, any dust, cobwebs, spiderwebs and/or other debris accumulations become dislodged, and fall by gravity to be captured in the housing and directed towards the outlet port 36 in being pulled away into the collection compartment of the vacuum cleaner 10 through vacuum assistance. As a result, substantially all the debris becomes collectible, by a user 22 standing on the floor surface 12, where the vacuum cleaner 10 rests, without any requirement to stand on a chair, foot stool, or stepladder in carrying out the process. An easy and simple manner of cleaning the ceiling fan blades thus results -- and, since the user 22 need only move the vacuum hose 14 and the housing 30 to accomplish it, their combined limited weight and bulk make it a simple and easy task, able to be done by members of either sex.

While there have been described what are considered to be preferred embodiments of the present invention, it will be readily appreciated by those skilled in the art that modifications can be made without departing from the scope of the teachings herewith. Thus, while the preferred embodiment has been described employing a rectangular-shaped housing -- along with a brush that spans across it --, any configuration for the housing and brush can be used effectively. Similarly, while a double-row bristle brush is described, any type of brush could be utilized instead, whether of a design to bear against top and bottom sides of the ceiling fan blade simultaneously, or only



individually, one at a time. Likewise, it will be understood that the housing can be constructed with a brush fitted wholly within, with a cover, in providing side entry openings for receiving a fan blade through one such opening, and an exit at an opposing opening -- and, in this respect, such arrangement, as far as the brush is concerned, continues to be one having the described open top for collecting the various debris. For at least such reasons, therefore, resort should be had to the claims appended hereto for a true understanding of the scope of the invention.